

WHAT IS CLAIMED IS:

1. An airbag device for a vehicle, comprising:

an inflatable airbag mounted within a seat back of a seat for an occupant and arranged to inflate forward and between the occupant and a vehicle side body in the event of a side impact of the vehicle;

an inflator responsive to the side impact of the vehicle for generating gas to inflate said airbag,

wherein said airbag comprises a head-protection portion arranged to be located at a side of a head of the occupant and a torso-protection portion arranged to be located at a side of at least a chest of the occupant in the inflated condition, and said head-protection portion and said torso-protection portion are formed separately and configured such that a volume of said head-protection portion is greater than that of said torso-protection portion at the time their inflation is completed.

2. The airbag device for a vehicle of claim 1, wherein said airbag is arranged to inflate forward from a side portion of the seat back, and a lower part of said head-protection portion and an upper part of said torso-protection portion are connected by a tether such that a forward inflation-force of said torso-protection portion generated in the inflated condition is conveyed to said head-protection portion through the tether.

3. The airbag device for a vehicle of claim 1, wherein said airbag is arranged to inflate forward from a side portion of the seat back, and a lower part of said head-protection portion and an upper part of said torso-protection portion are connected by a tether such that an upward inflation of said head-protection portion in the inflated condition is suppressed by said torso-protection portion through the tether.

4. The airbag device for a vehicle of claim 1, wherein said head-protection portion and said torso-protection portion are configured such that an inflation sustaining period of said head-protection portion is longer than that of said torso-protection portion in the inflated condition.

5. The airbag device for a vehicle of claim 4, wherein at least one of said head-protection portion and said torso-protection portion comprises a vent hole formed thereat, and said configuration that the inflation sustaining period of said head-protection portion is longer than that of said torso-protection portion in the inflated condition is adjusted by the vent hole.

6. The airbag device for a vehicle of claim 4, wherein at least one of said head-protection portion and said torso-protection portion comprises a material coated on an inside surface thereof, and said configuration that the inflation sustaining period of the head-protection portion is longer than that of the torso-protection portion in the inflated condition is adjusted by the coated material.

7. The airbag device for a vehicle of claim 1, further comprising an inflation assist device that promotes a forward movement of the inflation of said head-protection portion and suppresses an upward movement thereof at the beginning of its inflation.

8. The airbag device for a vehicle of claim 1, wherein said head-protection portion and said torso-protection portion are configured so as to complete their inflation at substantially the same time.

9. The airbag device for a vehicle of claim 1, wherein said head-protection portion and said torso-protection portion are configured such that an inflation completion timing of said torso-protection portion is earlier than that of said head-protection portion.

10. The airbag device for a vehicle of claim 1, wherein said inflator is formed as a common one for supplying the gas to both of said head-protection portion and said torso-protection portion, and there is provided a distributor for distributing the gas generated by said common inflator to said head-protection portion and said torso-protection portion.

11. The airbag device for a vehicle of claim 10, wherein said distributor is of a pipe shape which is connected to said inflator.

12. The airbag device for a vehicle of claim 11, wherein said pipe-shaped

distributor is made of cloth which is integral with said inflatable airbag comprising said head-protection portion and said torso-protection portion.

13. The airbag device for a vehicle of claim 10, wherein said distributor adjusts an amount of gas blowing into said head-protection portion and said torso-protection portion from said inflator respectively.

14. The airbag device for a vehicle of claim 13, wherein said distributor comprises a first outlet opening formed in said head-protection portion and a second outlet opening formed in said torso-protection portion, and said amount of gas blowing into said head-protection portion and said torso-protection portion is adjusted by each of opening area of said first and second outlet openings.

15. The airbag device for a vehicle of claim 13, wherein said distributor comprises a first outlet opening formed in said head-protection portion and a second outlet opening formed in said torso-protection portion, and said amount of gas blowing into said head-protection portion and said torso-protection portion is adjusted by the number of each of said first and second outlet openings formed.

16. The airbag device for a vehicle of claim 13, wherein said amount of gas blowing into said head-protection portion and said torso-protection portion is adjusted such that the amount of gas blowing into said head-protection portion is greater than that of gas blowing into said torso-protection portion.

17. The airbag device for a vehicle of claim 10, wherein an adjustment of the gas distribution by said distributor is configured such that said head-protection portion and said torso-protection portion complete their inflation at substantially the same time.

18. The airbag device for a vehicle of claim 10, wherein an adjustment of the gas distribution by said distributor is configured such that said head-protection portion and said torso-protection portion complete their inflation at substantially the same time, and said head-protection portion and said torso-protection portion are configured such that an inflation sustaining period of said head-protection portion is longer than that of said

torso-protection portion in the inflated condition.

19. The airbag device for a vehicle of claim 10, wherein said head-protection portion, said torso-protection portion, said inflator and said distributor are disposed within the seat back respectively, and said head-protection portion and said torso-protection portion are arranged to inflate forward from a side portion of the seat back.

20. The airbag device for a vehicle of claim 19, wherein said inflator is located in either one of said head-protection portion and said torso-protection portion, without being located in the other one, and said distributor connected to said inflator extends into the other one.

21. The airbag device for a vehicle of claim 1, wherein said inflator is comprised of a first inflator for supplying the gas to said head-protection portion and a second inflator for supplying the gas to said torso-protection portion, which are formed separately, and said first and second inflators have gas supply characteristics different from each other.

22. The airbag device for a vehicle of claim 21, wherein an amount of gas supply of said first inflator is greater than that of said second inflator.

23. The airbag device for a vehicle of claim 21, wherein an adjustment of the gas supply characteristics of said first and second inflators is configured such that said head-protection portion and said torso-protection portion complete their inflation at substantially the same time.

24. The airbag device for a vehicle of claim 21, wherein an adjustment of the gas supply characteristics of said first and second inflators is configured such that an inflation completion timing of said torso-protection portion is earlier than that of said head-protection portion.

25. The airbag device for a vehicle of claim 1, wherein the vehicle is a type of open car.

26. An airbag device for a vehicle, comprising:

an inflatable airbag mounted within a seat back of a seat for an occupant and

arranged to inflate forward and between the occupant and a vehicle side body in the event of a side impact of the vehicle, the airbag comprising a head-protection portion arranged to be located at a side of a head of the occupant and a torso-protection portion arranged to be located at a side of at least a chest of the occupant in the inflated condition, the head-protection portion and the torso-protection portion being formed separately;

an inflator responsive to the side impact of the vehicle for generating gas to inflate said airbag, the inflator being formed as a common one for supplying the gas to both of said head-protection portion and said torso-protection portion; and

a distributor for distributing the gas generated by said inflator for said head-protection portion and said torso-protection portion, the distributor being of a pipe shape which is connected to said inflator and made of cloth which is integral with said inflatable airbag comprising said head-protection portion and said torso-protection portion,

wherein said head-protection portion and said torso-protection portion are configured such that a volume of said head-protection portion is greater than that of said torso-protection portion at the time their inflation is completed, and

an amount of gas blowing into said head-protection portion and said torso-protection portion is adjusted by said distributor such that the amount of gas blowing into said head-protection portion is greater than that of gas blowing into said torso-protection portion.